In the Claims

1. (previously presented) An improvement in a method of microfabricating three dimensional structure in deformable silicone elastomer ~~elastomeric material~~ comprising photolithographically fabricating the three dimensional structure in the deformable silicone elastomer ~~elastomeric material~~ using semiconductor fabricating procedures, including ~~plasma~~ reactive sputtering deposition of a layer including silicon therein to allow for the formation of masking layers on the silicone elastomer by means of which the structure is photolithographically microfabricated.

2. (allowed) An improvement in a method of microfabricating elastomeric material having a characterizing surface tension comprising decreasing the surface tension of the elastomeric material and photolithographically processing the elastomeric material with decreased surface tension, where decreasing the surface tension of the elastomeric material comprising forming a silicon dioxide layer on the elastomeric material.

3. (allowed) The improvement of claim 2 where forming a silicon dioxide layer on the elastomeric material comprises sputter depositing silicon dioxide on the elastomeric material.

4. (currently amended) An improvement in a method of microfabricating an

elastomeric material having a characterizing surface tension comprising decreasing the surface tension of the elastomeric material and photolithographically processing the elastomeric material with decreased surface tension, where decreasing the surface tension of the elastomeric material comprises forming a silicon dioxide laver on the 6elastomeric material by. ~~The improvement of claim 2 where~~ sputter depositing silicon dioxide on the elastomeric material ~~comprises sputter depositing silicon dioxide~~ in an argon-oxygen plasma.

5. (allowed) An improvement in a method of microfabricating elastomeric material having a characterizing surface tension comprising decreasing the surface tension of the elastomeric material and photolithographically processing the elastomeric material with decreasing surface tension, where decreasing the surface tension of the elastomeric material comprising forming a silicon nitride layer on the elastomeric material.

6. (allowed) The improvement of claim 5 where forming a silicon nitride layer on the elastomeric material comprises sputter depositing silicon nitride on the elastomeric material.

7. (allowed) The improvement of claim 6 where sputter depositing silicon nitride on the elastomeric material comprises sputter depositing silicon nitride in an 3argon-nitrogen plasma.

8. (allowed) An improvement in a method of microfabricating elastomeric material having a characterizing surface tension comprising decreasing the surface tension of the elastomeric material and photolithographically processing the elastomeric material with decreased surface tension, where decreasing the surface tension of the elastomeric material comprising forming a silicon layer on the elastomeric material.

9. (allowed) The improvement of claim 8 where forming a silicon layer on the elastomeric material comprises sputter depositing silicon on the elastomeric material.

10. (currently amended) The improvement of claim 9 where sputter depositing silicon on the elastomeric material comprises sputter depositing ~~deposing~~ silicon in an argon plasma.

11. (allowed) The improvement of claim 2 further comprising forming a silicon nitride layer on the silicon dioxide layer.

12. (allowed) The improvement of claim 11 where forming a silicon nitride layer comprises sputter depositing silicon nitride on the silicon dioxide layer.

13. (currently amended) The improvement of claim 12 where sputter

depositing silicon nitride on the silicon dioxide layer comprises sputter depositing silicon nitride in an argon-nitrogen plasma.

14. (currently amended) The method of claim ~~1~~ 2 where decreasing the surface tension of the elastomeric material decreases the surface tension of polydimethylsilicone.

15. (currently amended) The method of claim ~~1~~ 2 where decreasing the surface tension of the elastomeric material decreases the surface tension of a room temperature vulcanizable (RTV) silicone elastomer (silanodimethyl polydimethylsiloxane).

16. – 20. (cancelled without prejudice)

21. (previously presented) The improvement of claim 1 further comprising directionally etching an elastomeric material comprising providing an RF plasma etching system, creating an oxygen plasma in the presence of Freon in the RF plasma etching system, removing silicon tetrafluoride from the RF plasma etching system.

22. (previously presented) The improvement of claim 21 where removing silicon tetrafluoride from the RF plasma etching system comprises pumping the silicon tetrafluoride out of the RF plasma etching system.

23. (previously presented) The improvement of claim 21 where creating an oxygen plasma in the presence of Freon comprises creating the oxygen plasma in an approximately 90% oxygen and 10% Freon mixture.

24. (previously presented) The improvement of claim 21 where removing silicon tetrafluoride from the RF plasma etching system comprises maintaining the oxygen plasma under a partial vacuum of approximately 400 mTorr.

25. (previously presented) The improvement of claim 1 further comprising directionally etching an elastomeric material comprising the steps of providing an RF plasma etching system, creating an oxygen plasma in the presence of Freon in the RF plasma etching system, and removing silicon tetrafluoride from the RF plasma etching system.